

4. Enhancing the Benefits of North Carolina's Forests

Pocosin Lakes National Wildlife Refuge, and in the Great Dismal Swamp.

Public lands hold the highest concentrations of pocosin and peatland communities in the Coastal Plain. Pocosins on private land have largely been ditched and converted to loblolly pine plantations by the forest products industry. Pond pine is a very long-lived tree and is very tolerant to fire. Under natural conditions, pond pine woodlands and high pocosin habitats would normally contain many trees more than 100 years old. Although much of the pond pine dominated sites are still very old, fire suppression is causing a large buildup of fuel. Concerns are that once these stands burn under wildfire conditions, the fire will be so intense that the ground will burn, thus killing the entire stand.

Threats. Fire suppression is an important factor threatening many remaining pocosin, peatland, and streamhead communities due to the strong influence fire has on their vegetative structure, composition, and diversity. Fire-suppressed stands may be invaded by species such as red maple; maples are reaching the canopies of some cedar stands in the long absence of fire. Many managers and landowners are wary of introducing fire to long fire-suppressed peatland communities due to the volatile nature of these communities and to smoke management concerns. When fire is introduced, fire lines are often placed directly in the transition zone between uplands and pocosins, destroying the species-rich ecotone and preventing fire from burning into pocosins.

Conversion of habitat also threatens pocosin habitats; ditching and draining of these sites leads to alteration of hydrology. When done in preparation for conversion to another land use, these activities ultimately lead to destruction of pocosin vegetation. Conversions for development, agricultural

and forestry interests are the major contributors. However, conversion to industrial pine plantations has slowed in recent years. Sedimentation due to clearing of adjacent uplands is also a problem for some streamhead communities.

Habitat fragmentation (as a result of habitat conversion and urbanization) threatens the integrity of pocosin and peatland communities because these communities typically occur as mosaics on the landscape and fire plays an important role in determining the structure of that landscape. As the landscape becomes fragmented, prescribed fire becomes more difficult to use as a management tool because of smoke management concerns and safety issues around urban areas.

In general, little detailed information exists for many species of wildlife that use pocosin habitats because of the impenetrable nature of these habitats. Few surveys have been done on a long-term basis, which makes land management decisions difficult. Pocosin habitats are important for a variety of shrub-scrub birds yet we are lacking status and distribution data, as well as detailed information, about the bird communities that utilize them (Karriker 1993). We also lack detailed information about populations of small mammals, bats, reptiles and amphibians in pocosin habitats (Mitchell 1994).

Wet Pine Savanna (WPS)

Description. This habitat type includes pine savanna, sandhill seep, and wet pine flatwoods communities, all of which are mineral wetlands that under natural conditions are subject to frequent burning. With fire, they are characterized by an open canopy dominated by longleaf pine or pond pine; an open midstory; and an understory composed of some mixture of wiregrass, cane, herbs, and pocosin shrubs, depending